(FILE 'HOME' ENTERED AT 10:18:52 ON 09 FEB 2001)

FILE 'CA, BIOSIS' ENTERED AT 10:19:01 ON 09 FEB 2001

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L1        161491 S PLASMID#
L2        753965 S SILICA OR GLASS
L3           417 S L2 AND L1
L4         28415 S THIOCYANATE#
L5            13 S L4 AND L3
L6            12 DUP REM L5 (1 DUPLICATE REMOVED)
L7         28415 S THIOCYANATE#
L8        616640 S ALCOHOL# OR METHANOL OR ETHANOL OR PROPANOL OR ISOPROPANOL
OR
L9        859194 S AMINO ACID# OR GLYCINE
L10           58 S L9 AND L8 AND L7
L11           53 DUP REM L10 (5 DUPLICATES REMOVED)
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L6 ANSWER 11 OF 12 CA COPYRIGHT 2001 ACS DUPLICATE 1
ACCESSION NUMBER: 112:194838 CA
TITLE: Rapid and simple method for purification of nucleic acids
AUTHOR(S): Boom, R.; Sol, C. J. A.; Salimans, M. M. M.; Jansen, C. L.; Wertheim-Van Dillen, P. M. E.; Van der Noordaa, J.
CORPORATE SOURCE: Dep. Virol., Acad. Med. Cent., Amsterdam, 1105 AZ, Neth.
SOURCE: J. Clin. Microbiol. (1990), 28(3), 495-503
CODEN: JCMIDW; ISSN: 0095-1137
DOCUMENT TYPE: Journal
LANGUAGE: English

AB A simple, rapid, and reliable protocol was developed for the small-scale purifn. of DNA and RNA from, e.g., human serum and urine. The method is based on the lysing and nuclease-inactivating properties of the chaotropic agent guanidinium **thiocyanate** together with the nucleic acid-binding properties of **silica** particles or diatoms in the presence of this agent. By using size-fractionated **silica** particles, nucleic acids (covalently closed circular, relaxed circular, and linear double-stranded DNA; single-stranded DNA; and rRNA) could be purified from 12 different specimens in less than 1 h and were recovered in the initial reaction vessel. Purified DNA (although significantly sheared) was a good substrate for restriction endonucleases and DNA ligase and was recovered with high yields (usually over 50%) from the picogram to the microgram level. Copurified rRNA was recovered almost undegraded. Substituting size-fractionated **silica** particles for diatoms (the fossilized cell walls of unicellular algae) allowed for the purifn. of microgram amts. of genomic DNA, **plasmid** DNA, and rRNA from cell-rich sources, as exemplified for pathogenic gram-neg. bacteria. Representative expts. are shown to illustrate some characteristics of the procedure which may have wide application in clin. microbiol.

L6 ANSWER 4 OF 12 CA COPYRIGHT 2001 ACS
ACCESSION NUMBER: 127:217442 CA
TITLE: A cartridge for a two-stage chromatographic purification of DNA from a heterogeneous mixture
INVENTOR(S): Davis, Thomas E.; Grothe, Alison M.; Schwartz, Henry L.; Gripp, John; Morrow, Danny G.; Van Huystee, Steven
PATENT ASSIGNEE(S): USA
SOURCE: U.S., 10 pp.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 5660984	A	19970826	US 1994-353074	19941209

AB A cartridge contg. two layers of chromatog. media that can be used in a rapid flow-through purifn. of DNA, esp. **plasmid** DNA, from a mixt. such as a cleared lysate or molten agarose is described. Use of a column eliminates the need to pellet, wash, and elute a DNA-binding medium such as **glass** powder. The upper layer of chromatog. medium is an anion-exchange resin of a non-porous styrene-divinylbenzene copolymer that has been derivatized with quaternary ammonium compds., e.g. cholestyramine, treated with nucleotide triphosphates. The second layer, sepd. from the first by a porous separator, is a **silica** gel that has been treated with a salt such as guanidine hydrochloride or sodium perchlorate. There is a second porous separator below this layer. The sample is passed over the first layer and DNA bound to it and other components washed through. The DNA is then eluted from the ion-exchange resin with a soln. of the salt that the **silica** gel has been equilibrated in. The DNA that has bound to the **silica** gel is washed with aq. ethanol and is eluted with a low ionic strength buffer.

L11 ANSWER 7 OF 53 CA COPYRIGHT 2001 ACS
ACCESSION NUMBER: 132:941 CA
TITLE: Rapid and simple process for isolation of circular nucleic acids
INVENTOR(S): Sauer, Philippe; Kang, Jie
PATENT ASSIGNEE(S): Qiagen G.m.b.H., Germany
SOURCE: PCT Int. Appl., 32 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9961603	A1	19991202	WO 1999-EP3660	19990527
W: JP, US				
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
EP 969090	A1	20000105	EP 1998-109593	19980527
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				

PRIORITY APPLN. INFO.: EP 1998-109593 19980527

AB A method for sepg. and/or isolating circular nucleic acids from a mixt. having different species of nucleic acids other than circular nucleic acids wherein the mixt. is treated under alk. conditions at a pH > 8 with a solid matrix consisting essentially of a silica material in presence of at least one chaotropic substance.

REFERENCE COUNT: 4
REFERENCE(S):
(1) Carter, M; NUCLEIC ACIDS RESEARCH 1993, V21(4), P1044 CA
(2) Marko, M; ANALYTICAL BIOCHEMISTRY 1982, V121(2), P382 CA
(3) Qiagen GMBH; WO 9501359 A 1995 CA
(4) Therexsys Ltd; WO 9729190 A 1997 CA